

What is Claimed:

1. A network address translation system for isolating internal IP traffic from external IP traffic in the Inter-Working Function of a Global System for Mobile Communications network, comprising:

network means for interconnecting an Inter-Working Function Protocol Engine and an Inter-Working Function Management System, located in said Inter-Working Function;

internal IP address means for assigning a port of said Inter-Working Function Protocol Engine with a private IP address for use exclusively on said network means;

external IP address means for assigning said port of said Inter-Working Function Protocol Engine with a public IP address for access from a source located external to said Inter-Working Function; and

routing means for assigning a one of said private and public IP addresses to data transmissions received at said network means and associated with said port of said Inter-Working Function Protocol Engine.

2. The network address translation system of claim 1 further comprising:

L2TP network server means connected to said network means for interconnecting said network means with the Internet.

3. The network address translation system of claim 2 wherein said routing means comprises:

address means for appending said assigned public IP address to said data transmission as a source address when said port of said Inter-Working Function Protocol Engine is a source of said data transmissions for transmission to said L2TP network server means.

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4. The network address translation system of claim 3 wherein said routing means comprises:

address means for appending said assigned private IP address to said data

transmission as a destination address when said port of said Inter-Working Function Protocol Engine is a source of said data transmissions for transmission to said Inter-Working Function Management System.

- 5 5. A method using network address translation for isolating internal IP traffic from external IP traffic in the Inter-Working Function of a Global System for Mobile Communications network, comprising:

interconnecting via a network an Inter-Working Function Protocol Engine and an Inter-Working Function Management System, located in said Inter-Working
10 Function;

assigning a port of said Inter-Working Function Protocol Engine with a private IP address for use exclusively on said network;

assigning said port of said Inter-Working Function Protocol Engine with a public IP address for access from a source located external to said Inter-Working
15 Function; and

assigning a one of said private and public IP addresses to data transmissions received at said network and associated with said port of said Inter-Working Function Protocol Engine.

- 20 6. The method of claim 5 further comprising:

interconnecting said network with the Internet via a L2TP network server connected to said network.

7. The method of claim 6 wherein said step of assigning a one of said
25 private and public IP addresses to data transmissions received at said network comprises:

appending said assigned public IP address to said data transmission as a source address when said port of said Inter-Working Function Protocol Engine is a source of said data transmissions for transmission to said L2TP network server.

- 30 8. The method of claim 7 wherein said step of assigning a one of said private and public IP addresses to data transmissions received at said network comprises:

appending said assigned private IP address to said data transmission as a destination address when said port of said Inter-Working Function Protocol Engine is a source of said data transmissions for transmission to said Inter-Working Function Management System.

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